User's Manual

Digital Satellite Receiver

DSR-310SKCI

Dmsis

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1. Introduction

1-1 Overview

This Receiver is your “Window to the World” giving you the opportunity to enjoy both Free-To-Air and encrypted programs. Enjoy the rich choice of more than 4,000 different channels, broadcasting a large range of culture, sports, cinema, news, events, etc and the advanced functions of channel editing as your pleasure.

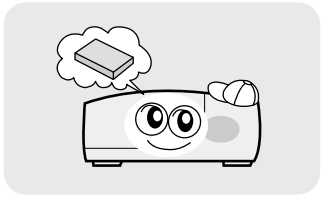
1-2 Main Features

- Fully compliant with MPEG-2 and DVB standards
- User friendly operating Menu and On-Screen Graphic Menu
- Easy to use EPG(Electronic Program Guide) on screen
- Extended EPG and Program reservation through EPG
- Name Changeable 5 Favorite groups
- Each Channel Volume Saving Function
- 4 Color buttons for rapid selection and convenience
- Age protection lock function
- Tele-text encoding
- Manual PID control
- Software downloading via RS-232C connector
- DiSEqC 1.0 &1.2 compatible
- Integrated COMMON INTERFACE and SKYCRYPT Conditional Access System
- Multi-access with two Common Interface card reader and one card slot for SKYCRYPT Conditional Access System

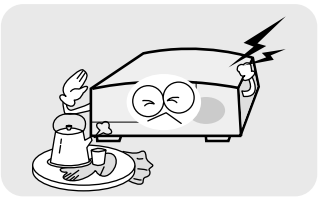
2. Safety / Precaution

2-1 Safety

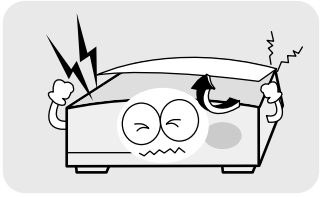
Be sure read the user’s manual before starting the operation of the unit.



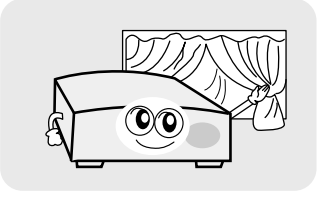
Do not touch the cord with wet hands as it may cause electric shock.



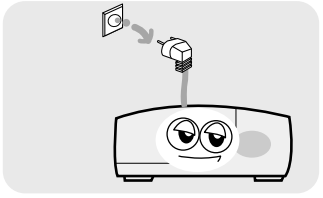
Never open the cover. It is very dangerous to touch the inside of the unit due to pdssible electric shock.



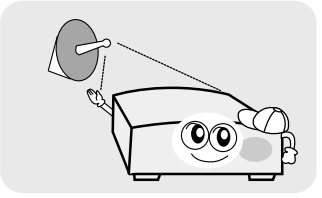
Place the unit a well ventilated and no-heat enviroment.



When you do not use this unit for a long time, make sure that power cord is pulled out from the outiet. Also do not use a damaged power cord as it may cause fire or electric shock.



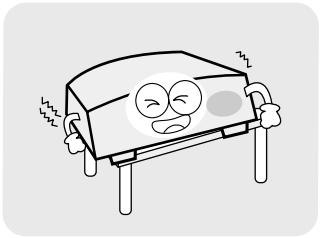
A professional installation is required.
If reception is intemupted, comtact your local service centre.



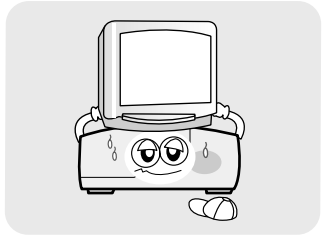
2-2 Precaution

When installing the unit

Install the unit horizontally, An uneven installation may cause the unit be damdged.

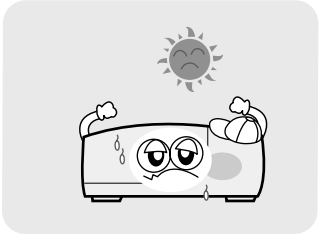


Do not put heavy items such as a TV on the unit. That may cause the unit to be damaged.

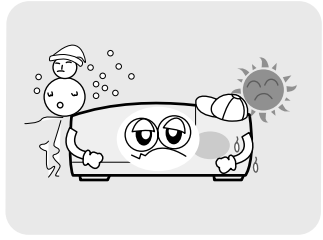


Do not install the unit.

- Where it is subject to vibrations.
- Where it is exposed to direct sunlight.
- Where there is humidity.
- Where the temperature is too high or too low.
- Where there is no ventilation.



Moving the unit to a hot area from a cold one will cause condensation. Do not operate the unit for one or two hours or until it has dried completely.



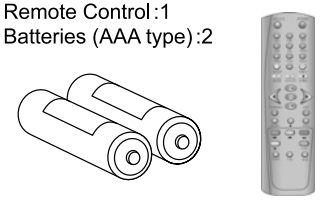
3. Check Points Before Use

3-1 Accessories

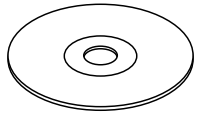
Accessories of this are as below

User's manual : 1

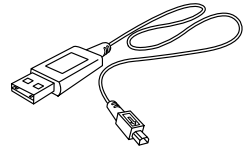
Remote Control : 1
Batteries (AAA type) : 2



SKY VideoLink Installation CD : 1



USB Cable : 1(Optional)



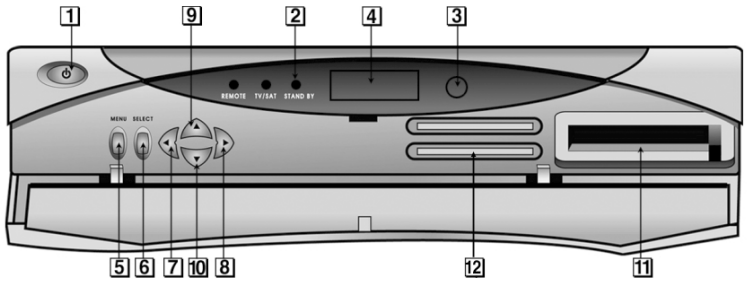
3-2 The Satellite Dish

Your dish should be properly installed.
Azimuth and elevation must be precisely set up.

This unit is working with DISEqC 1.2 on a compatible antenna positioner.
Ask your dealer for information.

4. Controls / Functions

4-1 Front Panel



1 Power
To switch the receiver in “standby” mode or in power on mode.

2 Standby/Power On Indication LED
Turns on Red LED while in the “standby” mode and turns off the Red while in the ‘Power On’ mode.

3 Remote Sensor
Receives the infrared signal from the remote control unit.

4 Channel Display(4Digit)
- In ‘Standby’ mode, the current time is displayed.
- After programming, the program number is displayed.

5 Menu
To launch or terminate the menu application.

6 Select
To activate a highlighted item or go to the next level on hypertext menu or confirm the user’s action.

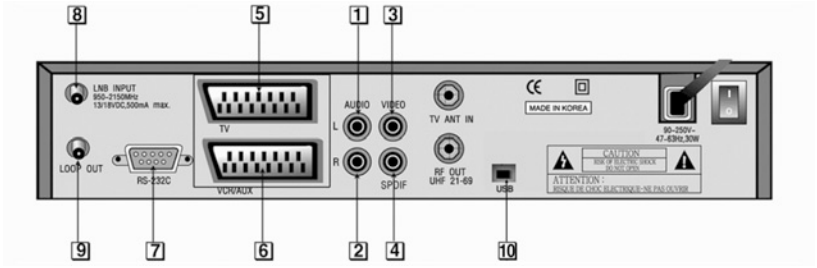
7~8 Vol. (◀/▶)
To adjust the volume level or change the value of an item according to the preprogrammed values. The key Vol. ◀ can be used as a backspace to cancel the numerical input.

9~10 CH. (▲/▼)
To change channel or cursor position on the application screen.

11 Slot A,B (Common Interface)
2 Slots for Common Interface CAM to watch encrypted programs (Viaccess, Irdeto, Nagravision, Cryptoworks, Conax...)
Need proper Smart card provided by a broadcaster as well.

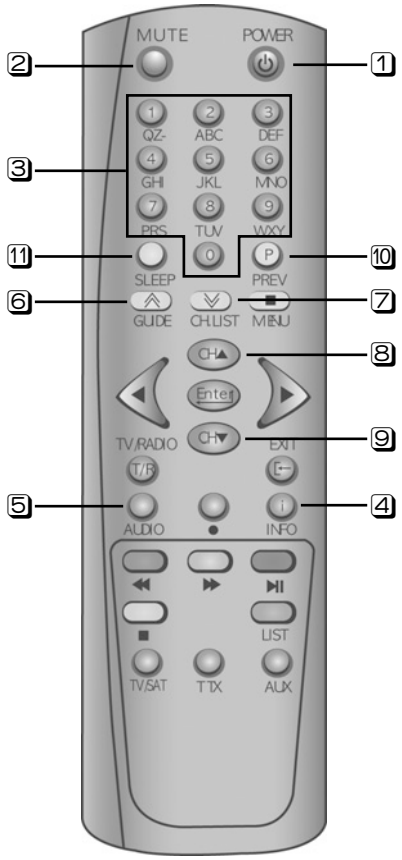
12 Smart Card Slot
Smart Card : provided by a broadcaster for watching SKYCRYPT scrambled programs.

4-2 Rear Panel



NO	Name	Connector	a Function
1	AUDIO L	RCA cinch	Left audio output.
2	AUDIO R	RCA cinch	Right audio output.
3	VIDEO	RCA cinch	Composite video output
4	S/PDIF or 0/12V(Optional)	RCA cinch	Digital audio output or Used for switching satellite(LNB)
5	TV SCART	SCART	SCART output to TV
6	VCR/AUX SCART	SCART	SCART output to VCR Analog receiver or Hi-Fi
7	RS-232C	DB-9	Low speed serial port.
8	LNB INPUT	IEC 169-24 female	IF input from LNB to digital tuner
9	LOOP OUT	IEC 169-24 female	IF loop-through output from Digital tuner
10	USB	USB Connector Type B	PC Connecting Port

4-3 Remote Control



1 **POWER :**
To switch between 'standby' and 'power on' mode.

2 **MUTE :**
To turn the sound on/off.

3 **Numeric Buttons(0-9) :**
To select channels and enter the channel information and PIN code.

4 **INFO :**
To display the current channel information.

5 **AUDIO :**
To change the audio track, stereo-mono mode.

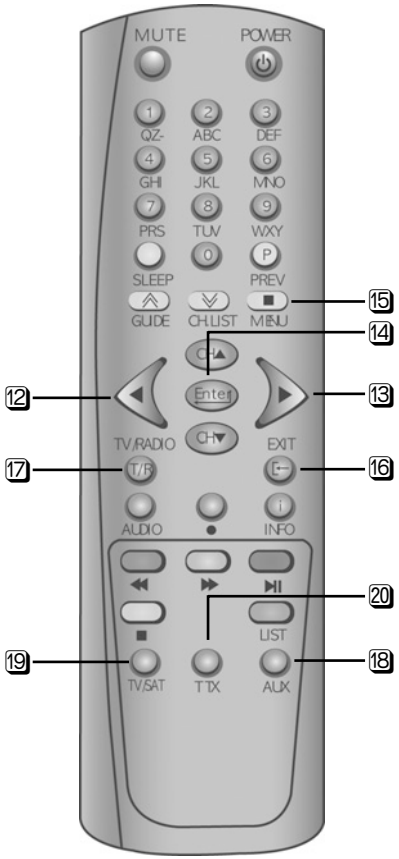
6 **GUIDE :**
(EPG : Electronic Program Guide)
To watch program guidance.

7 **CH LIST :**
To watch the channel list.
To edit programs.

8, 9 **CH. (CH▲) & CH (CH▼) :**
To change program in the display mode.
To move the location of cursor up and down in menu.

10 **PREV :**
To go back to previous channel.

11 **SLEEP :**
To select a preset time interval for Automatic switch off.



12,13 **VOL. ◁ &VOL. ▷ :**
To increase or decrease the volume level.
To move the cursor right and left in the menu.
To change the value of the selected item in the menu.
To cancel the numerical input in the menu.

14 **ENTER :**
To select an item or confirm in the menu.
Still(Pause) function in display mode.

15 **MENU :**
To enter the main menu.

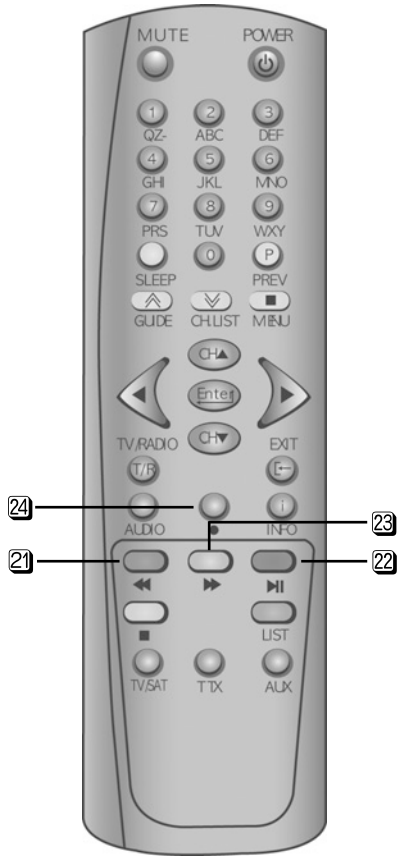
16 **EXIT :**
To return to previous status or exit from the main menu.

17 **TV / RADIO :**
To switch between the TV and radio change.

18 **AUX :**
To select the output mode of SCART connector.

19 **TV / SAT :**
To toggle the TV output source between the satellite intput and UHF / VHF antenna input.

20 **TTX :**
Teletext Service.



21 **GREEN**:
To sort channel in the Channel List menu.
To show current / next program information in the EPG menu.

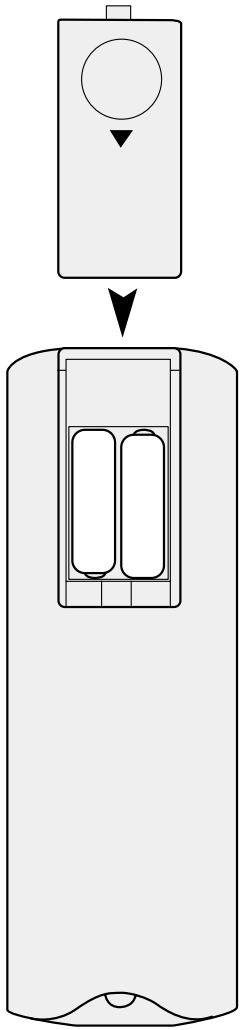
22 **BLUE** :
To see variant channel lists for user's convenience in the Channel List menu.
To show extended program information in the EPG menu.

23 **YELLOW** :
To edit channel in the Channel List menu.
To show program schedule information in the EPG menu.

24 **RED** :
To cancel edit mode in the Channel List menu.
To reserve timer in the EPG Menu.

5. Using the Remote Control Unit

5-1 Batteries



▶ **How to insert a battery :**

❶ Open the cover at the top of the rear side of the remote control unit.
❷ Insert two AAA type batteries(1.5V) to be aligned with appropriate +/- polarity.
❸ Close the cover completely.

▶ **When to replace a battery :**

If the operational range of remote control unit is getting smaller, it indicates batteries are almost consumed.
Replace both batteries together.

▶ **How to replace a battery :**

❶ Check +/- polarity and insert batteries to be aligned with appropriate +/- polarity.
❷ Even if old and new batteries are the same in size, do not use batteries with different characteristics.

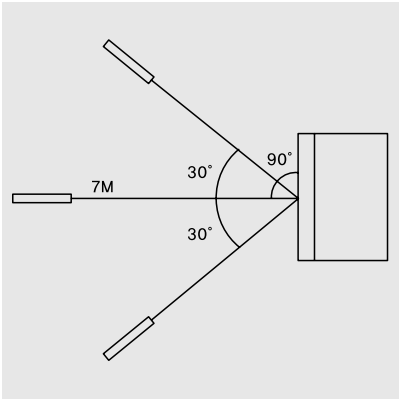
▶ **Accident prevention :**

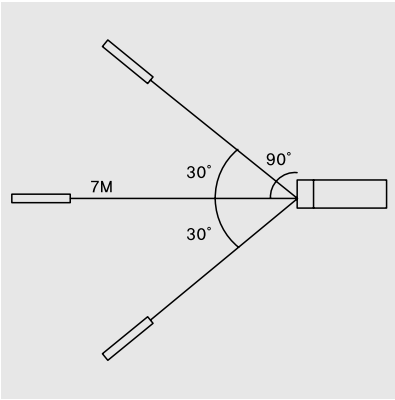
❶ Do not recharge, heat or disassemble the battery. Do not cross +/- polarity.
❷ If remote controller is not going to be used for a long time, take out the batteries.

5-2 Range of Operation

❶ The remote control unit can be detected by the receiver within an angle of 30 degrees to left and right.

❷ The transmission distance of the remote control is 7m in direct line of sight.





※ Note

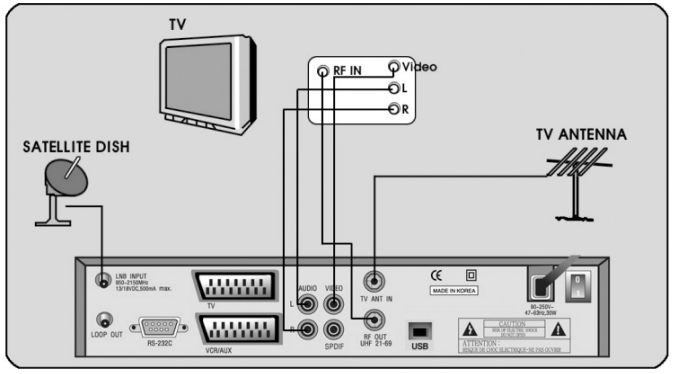
❶ ***When the remote control is not operative***
Replace batteries with new ones and check AC power plug on the receiver.

❷ ***Abnormal operation***
Disturbance with its peripheral devices might occur.
Ensure that other products which might cause interference are placed further away from the receiver.

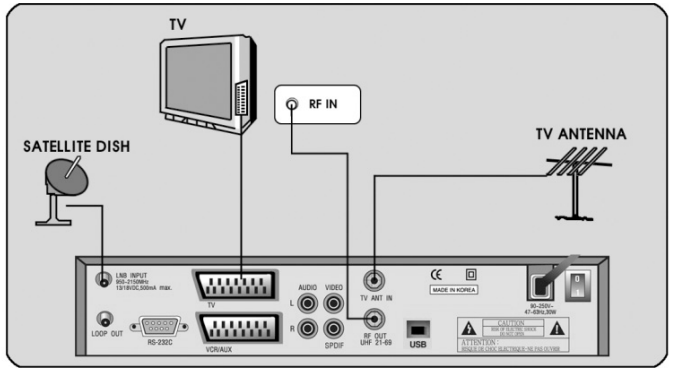
❸ ***Notes for handling***
If exposed to heat or water, the main body and the remote control unit may be damaged, so be careful.

6. How to Connect

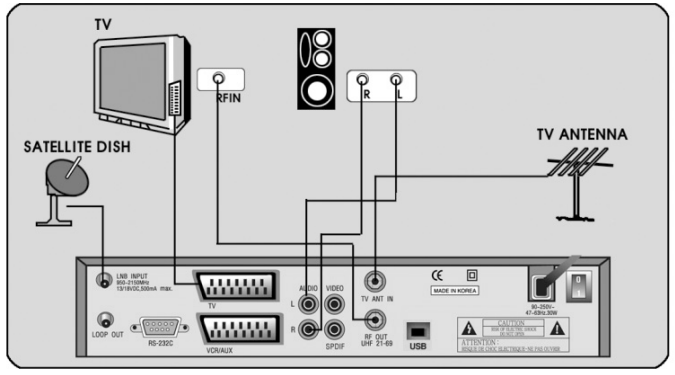
6-1 When Connecting IRD to TV with RF, AV connectors



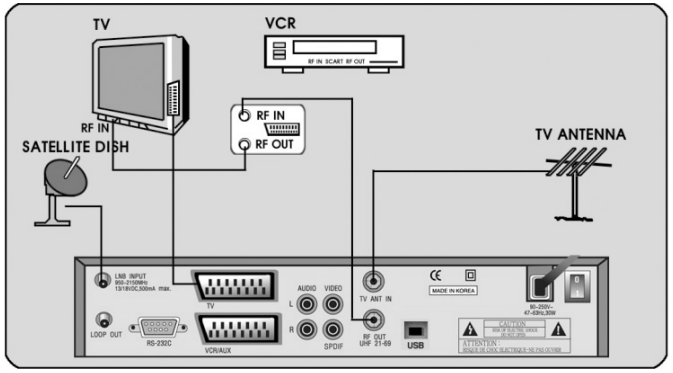
6-2 When Connecting IRD to TV with RF, SCART



6-3 When Connecting IRD to Hi-Fi system and TV with RF, SCART



6-4 When Connecting IRD to VCR and TV



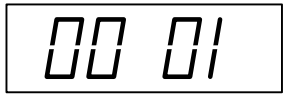
7. Getting Started

After Switch on your receiver on the rear panel, proceed with following installation.

Initial Language Selection

❶ When you plug in AC power and switch on, the following will be displayed on the front.

❷ Press **POWER** on the RCU, the LED number will be displayed as follows.



❸ If you turn on the Receiver for the first time or after executing factory default, Language selection menu will be displayed automatically as follows.

Screen

❹ Select your preferred Language with CH▲ or CH▼ and Press Enter.

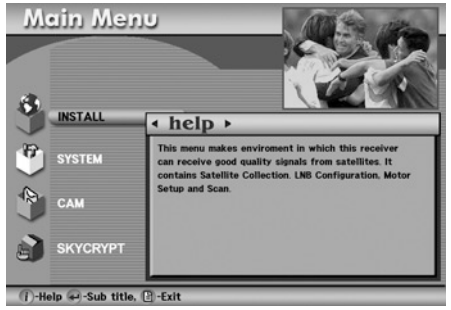
※ Note : You can also select Language at the main menu (Refer to 21 Page)

7-1 Basic Functions

1) Help Message

If you want to know how to use current part in the menu, use 'help' function by pressing **INFO** button.
For example, if you want to know about the installation menu, select **install** and press **INFO** button. Then you can see the help message.

Screen


Main Menu
INSTALL
SYSTEM
CAM
SKYCRYPT
help
This menu makes enviroment in which this receiver can receive good quality signals from satellites. It contains Satellite Collection, LNB Configuration, Motor Setup and Scan.
-Help -Sub title, -Exit

※ Note : INFO button works as "Help" function only on OSG mode (Main menu, CH.List, EPG).

In each page of menu, there is actual control guidance for next procedure. Referring to it, you can do the next procedure easily even without the user manual's help.

2) Channel Selection

You can change the current channel to any other channel you want.

- If you do not know the channel name or you want to select a channel randomly, you can navigate between channels with CH▲ or CH▼ until you find the channel you want.
- If you know the channel number, enter the number directly.
- If you know the channel name, press **CH LIST** button and select the channel you want with CH▲ or CH▼, and press Enter.

Screen

You can check the detailed information of the selected channel at the right section.

3) Volume Control / Mute

While you are watching a program, press ◁ or ▷ to control volume of the current channel.

You can configure volume of each channel differently.

Screen

▶ When necessary, press **MUTE** button to remove the sound temporarily. Then, your receiver goes into mute condition. Press **MUTE** button again to turn the sound on.

4) Subtitle/Audio

You can adjust the subtitle and audio condition/status of the current channel.

❶ Press **AUDIO** button and then Audio related window will be displayed on the screen.

Screen

❷ Select the Item you want to adjust with CH▲ or CH▼ and change the parameters with ◁ or ▷ .
It consists of ;

Subtitle	Select **Yes** to activate the function, or **No** not to do
Subtitle Track	(Subtitle language #) of (all subtitle language available in this program) [Current selected subtitle language]
Audio Track	(Audio track #) of (all tracks available in this program) [spoken language in this program]
Audio Mode	Stereo → Mono-Left → Mono-Right
Compressed or **Non-compressed (Dig. Output)**	

※ Note : These subtitle and audio parameters are work only when the receiving channel supports these functions.

5) Previous Channel.

If you want to watch previous channel, press **PREV** button.
Then a channel will go back to the channel that you watched just before.

6) Still(Pause) picture

If you want to pause picture while you watching TV, press (Enter).
Press (Enter) again to stop still picture.

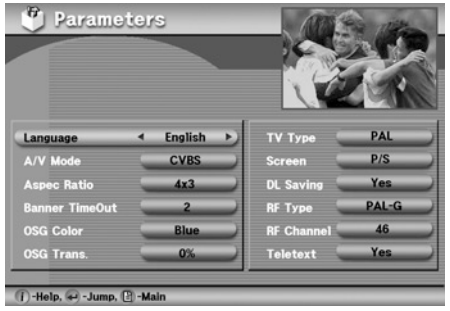
7) Cursor movement

In most case of OSG menu, the arrow buttons (◁ , ▷ , (CH▲) and (CH▼)) are used to move the cursor to left, right, up and down. In case you want to move channels faster in the Ch List mode, you can use (∧) or (∨). The cursor will move to every 8th channel.

7-2 System Parameters Set-up

You can set various parameters of your TV system and the Receiver for your better eye pleasure.
Press **MENU** button and select **System → Parameters** in the main menu and press (Enter).

Screen



※ Note : The default password is '0000'.

1) Language

Select your preferred Language with ◁ or ▷ .

2) A/V Mode

Select A/V mode of your system with ◁ or ▷ .

3) Aspect Ratio

This allows you to select your TV aspect ratio to 4:3 or 16:9 according to your wish with ◁ or ▷ .

4 × 3	When your TV is 4:3
16×9	When your TV is 16:9

※ Note : If you set 4 x 3 when the Satellite input signal is 16 x 9, the right and the left part of the original picture may not be seen.

4) Banner Timeout

You can set Banner time(1~5 second) as your pleasure with ◁ or ▷ .

5) OSG Color

Select the OSG color you prefer with ◁ or ▷ .
There are 4 colors defaulted in the Receiver(Blue, Violet, Gray, Green)

6) OSG Trans.

Select your preferred OSG transparency(0~50%) with ◁ or ▷ .

7) TV Type

You can set your TV system with ◁ or ▷ .

Multi	When your TV is compatible with NTSC/PAL dual mode.
PAL	When your TV is only for PAL reception. Regardless of satellite signal, the display will be done in PAL format.
NTSC	When your TV is only for NTSC reception. Regardless of satellite signal, the display will be done in NTSC format.

※ Note : If the satellite signal and your TV type are mismatched, the TV picture may be distorted. Even in this case, MENU will be displayed as normal.
(ex. When you receive PAL satellite signal with NTSC TV type setting or vice verse)

8) Screen

You can select the satellite input signal display mode.
Press ◁ or ▷ to select **P/S** or **L. Box.**

P/S	When you set screen display boundary from Pan/Scan data of Satellite input signal.(For signal for 16 x 9 program)
L.Box	You can watch 16 x 9 ratio screen by reducing original size vertically and horizontally.

※ Note : 1. If you select L.Box, the screen might be distorted. Upper and lower part of the screen will be blocked with black stripes.
2. 'Screen' function is helpful when receiving 16 x 9 signal with normal 4 x 3 format TV.

9) DL Saving(Summer Time)

You can adjust current local time when Daylight saving time(summer time) is applicable.
Press ◁ or ▷ to select **Yes** or **No**.

Yes	Set for daylight saving function activated The current time automatically moves one hour ahead
No	Set for daylight saving function deactivated

※ Note : Without current local time setting, this menu cannot be processed.

10) RF Type

If necessary, You can select the RF type.(NTSC,PAL-G,PAL-I,PAL-K)

11) RF Channel

If necessary, you can set proper RF channel.

12) Teletext

You can set the Teletext function.
Press ◁ or ▷ to select **Yes** or **No**.

※ Note : After setting all parameters, press Menu button or Exit button to return to Main Menu.

8. Installation - Automatic Channel search

Now, Let's start channel search and store the searched channels in the Receiver. Since the receiver has the basic data of most satellites and channels, you can receive programs just by plugging in. But, according to the status of your antenna setup, you may have to modify the basic data of preprogramed satellites and /or channels.

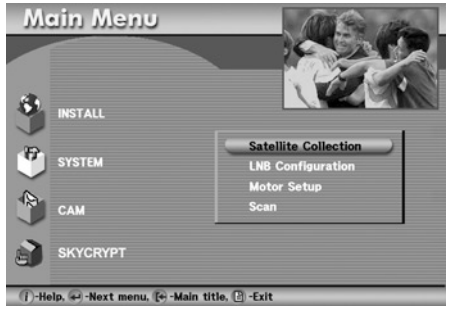
Installation menu consists of 4 steps ;
Satellite Collection → LNB Configuration → Motor setup → Scan.
For each next step, there are 2 alternatives you can select, which is 1) Go back and selecting next step, or 2) Using Color buttons(Green, Yellow, Blue, Red) for direct reach.

8-1 Satellite Collection

As the first step, you have to select your preferred Satellites among pre-programmed Satellite list.

❶ Press **MENU** button and Select **Install** → **Satellite Collection** and press Enter.

Screen



❷ Enter 4-digit password.

※ Note : The default password is '0000'

❸ Locate the cursor to the satellite you want to add with CH▲ or CH▼ and press ◁ or ▷ for selection, and then press Enter after confirmation message.

Screen

※ Note : To delete any satellite you added, press ◁ or ▷ again and press Enter after confirmation message.
If you want to collect more satellites, just do the same procedure again.

When necessary, you can change a satellite name as you wish. press Enter then the cursor will move to the selected satellite in the right section. You can enter alphabetic characters with numeric buttons of your RCU. For example, if you want to enter SAT-1,
Press ⑦⑦⑦⑦ ▷ ②② ▷ ⑧⑧ ▷ ①①①① ▷ ①.

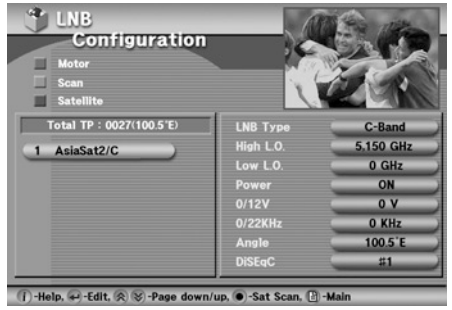
8-2 LNB Configuration

You can set LNB by pressing **Green** button directly or selecting **LNB Configuration** in the main menu.

※ Note : Instructions hereunder are for the case of using Color buttons.

❶ Press **Green** button at the **Satellite Collection** mode to enter the **LNB Configuration** mode.

Screen



❷ Select Satellite that need to be changed or reset its values and press Enter, the cursor will move to right section.

❸ Select item to be edited with CH▲ or CH▼ and change its parameters.
- LNB Type : Select the proper LNB type of the Satellite with ◁ or ▷ .
- High L.O. / Low L.O. : Enter LNB oscillator frequency with numeric buttons.
- Power : Set LNB power ON or OFF with ◁ or ▷ .
- 0/12V : Set the path of 0/12V switch box with ◁ or ▷ .
- 0/22KHz : Set the path of 0/22KHz switch box with ◁ or ▷ .
- Angle : Enter satellite angle with numeric keys.
- DiSEqC : Press Enter and Set the path of DiSEqC box with ◁ or ▷ and Press Exit button.

Committed	In case of using 2 or 4 LNB input DiSEqC box
Uncommitted	In case of using 16 LNB input DiSEqC box
Repeat	If your DiSEqC box doesn't work properly, increase Repeat value and try again

If you want to check, before channel search, whether you set the DiSEqC properly according to its connection, Check Signal Level and Quality at the Motor Setup mode by pressing Green button or at the Scan mode by pressing Yellow button.
If you set the DiSEqC properly, those indicators will show.

Tuner	Lock
FEC	1/2, 2/3, 3/4, 5/6 or 7/8
Level	over 30%
Qual.	over 10%

※ Note : 1. When you change each parameter, you need to know exact parameter of LNB to modify L.O.(local oscillator) frequency.
2. When you change each parameter, you need to understand environment of connecting the receiver and antenna in order for you to set 12V, 22KHz and DiSEqC properly.

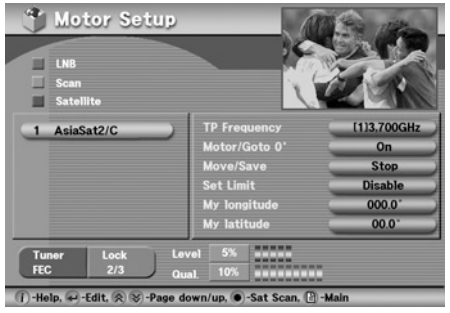
8-3 Mortor Setup (DiSEqC1.2)

If you are using DiSEqC1.2 positioner motor, You need to position your antenna correctly for reception of the best signal.

❶ Connect your DiSEqC motor and the Receiver with proper cable.

❷ Press **Green** button on the **LNB configuration** mode.

Screen



Level	Indicating selected satellite signal strength level
Quality	Indicating signal to noise ratio

❸ Select a satellite you want with CH▲ or CH▼ .

❹ Press Enter to move to TP section and select any TP you want with ◁ or ▷ .

❺ DiSEqC 1.2 Positioner Setting.

- Motor/Goto 0
Determine the kind of Motor & whether or not controlling it by using ◁ or ▷ .

On	Using DiSEqC Motor.
Off	Not using DiSEqC Motor.
STAB	Using the specific Motor supplied by Stab company. Determine the longitude of the satellite on LNB Configuration Menu. If the longitude of the satellite on LNB Configuration Menu is set, user must input the longitude about your Position at present.

If you press Enter, DiSEqC Motor will move toward Zero Equator.

- Move / Save
Select West/East direction with ◁ or ▷ .

◁ ▷	Move your antenna to east direction. Move your antenna to west direction.
Enter	Store the position of your antenna.

- Set Limit
Select limit of your antenna movement to east/west direction and press Enter .

※ Note : This may be necessary to protect your antenna from any possible collision between your antenna and certain obstacles nearby it.

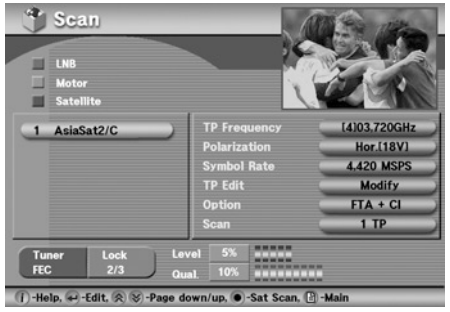
- My longitude / My latitude
You can use this item when STAB is set on 'Motor/Goto 0'.
Determine your longitude & latitude at present.
'East/West' is changed by using ◁ or ▷ .

8-4 Satellite Scan

After finishing **Motor Setup**(In case you want to use DiSEqC motor) or **LNB configuration**, you can do channel search. The receiver will start to search all the available channels and save them in the memory.

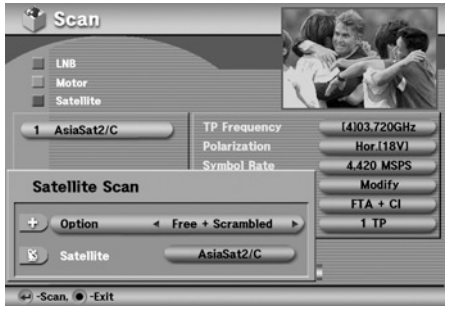
❶ Press **Yellow** button, or Select **Scan** in the main menu with CH▲ or CH▼ , and press Enter .

Screen



❷ Pressing **RED** button. Then **Satellite Scan** mode will be pop-up.

Screen



You can do TP edit and Manual TP Search in this Mode Refer to page 51.

❸ Select **Free only** or **Free+Scrambled** in the **Option** with ◁ or ▷ .

- Free only : If you want to scan Free channel only
- Free+Scrambled : If you want to scan both Free and Scrambled channels altogether.

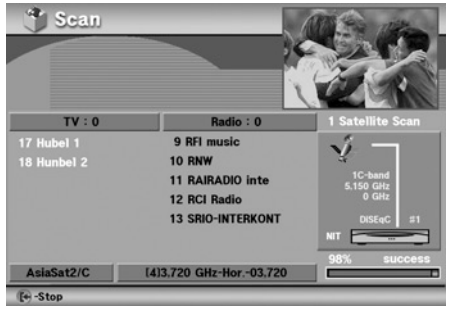
❹ Move the cursor to **satellite** with CH▼ and select the satellite you want to scan with ◁ or ▷ .

- Satellite name : If you want to scan only 1 satellite
- All Satellites : If you want to scan all satellites you setup before

You can see the satellites you collected before at the Satellite Collection mode. All satellite should be set properly.

❺ Press Enter, and then the channels of selected satellite(s) will be scanned.

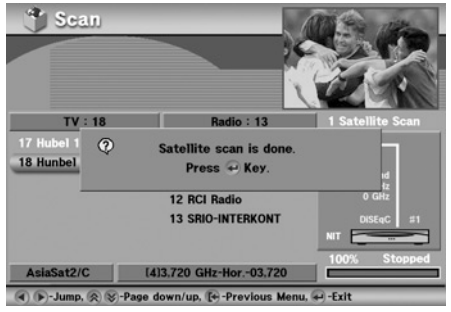
Screen



While scanning, you can see the red procedure bar, procedure percentage and a dynamic status animation on the right section of OSG.
Also, 'SCAn' message(LED) will be shown on the front panel.

❻ After the scanning process, the first channel of the last scanned TP will be displayed on the back screen.

Screen



❼ Press (Enter) to finish the process and select a channel.
Press (Enter) to watch a program, or press MENU or EXIT button.

※ Note : Now, you have completed all steps needed for watching programs. If you could not see the program after finishing these procedures, please contact your engineer or representative.

9. Channel Edit

After satellite scan, you may need to edit the TV or Radio channels as your pleasure.
In this mode of **TV Ch.List**, by pressing **CH.LIST** button simply, you can find channels you want to watch and you can edit searched channels at your disposal. This mode consist of **Sorting, Editing** and **Display Mode**.

1. If you want Radio Ch.List and want to edit Radio channels, you have to select Radio mode first. Press TV/RADIO button on the RCU, TV will be toggled to Radio mode.
2. After you do Sorting or Editing, you can execute displaying them at the Display Mode.
3. Using PIG function in the Receiver, you can do your work easily.
4. You can also do the volume control with ◁ or ▷.

9-1 Sorting Channels

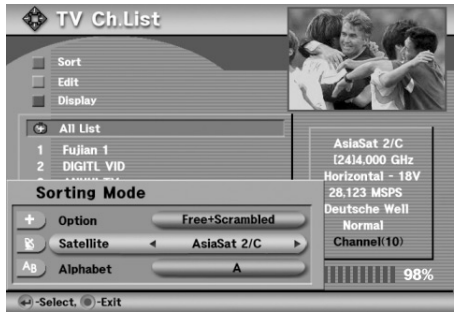
Press Green button. You can sort the Free only or Free+Scrambled channels by Satellite or Alphabet.
- Satellite : Satellite 1, Satellite 2,....., All satellite
- Alphabet : ABC, A, B,....., Z, 0~9, ETC

1) Satellite

By using this function, you can sort Free only or all channel list of the selected satellite.

❶ Press **Green** button and Select Free only or Free+Scrambled in the Option with ◁ or ▷.
❷ Select satellite name you want to sort in the Satellite column with ◁ or ▷.

Screen



❸ Press (Enter), then you can see the sorted channel list according to your selected satellite and option.

For example, If you want Free channels only in AsiaSat2/C, select Free only in Option and Select AsiaSat2/C in Satellite and then press (Enter)

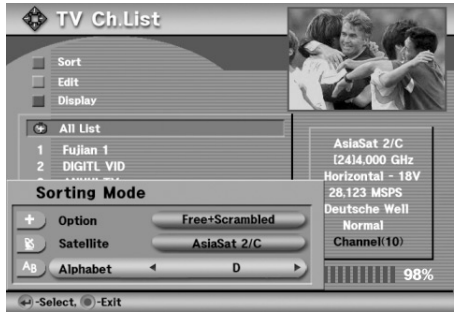
2) Alphabet

By using this function, you can sort the channel list according to the Alphabetical order. This function is useful when you search certain channels among the list of thousands of channels.

For example, if you want to see the Free+Scrambled channel list which starts its channel name with '**D**'.

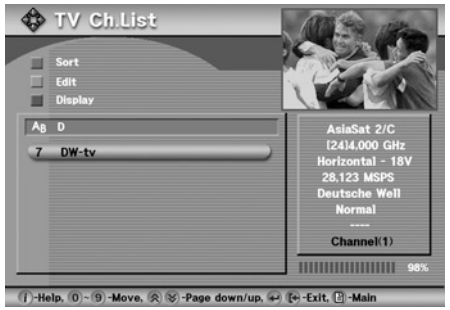
❶ Press **Green** button and select Free+Scrambled in Option.
❷ Select D in the **Alphabet** with ◁ or ▷.

Screen



❸ Press (Enter).

Screen



❹ You can see the channel list that has initial '**D**'.

※ Note : Alphabet mode consists of;

- ABC : Array scanned all channel list in an alphabetical order(A~Z).
- A~Z : Sort channels which start its channel name with "A".
- 0~9 : Sort channels which start its channel name with Arabic numbers.
- ETC : Sort channels which start its channel name with other language.

The channels sorted by Satellite or Alphabet in this Sorting mode is stored and you can display also at the Display Mode.

※ Note : 'Scrambled' channel can be shown only with CI (Common Interface) model and CAS (Conditional Access System) model.
'Free' channel can be shown with all models.

9-2 Editing Channels

Press **Yellow** button to edit scanned channels as your pleasure.
Using this function, you can execute belows,

- Favorite : Sets your 5 favorite groups. (Favorite 1~5)
- LOCK : Locks the channels.
- MOVE : Moves specific channel to desired position.
- DEL. : Deletes channels.
- ADD : Add/Modify channels.

1) Favorite Channel

You can make 5 favorite channel groups and possible to change each favorite group name as your convenience.
For example, If you want to set below channels at Favorite 1, Please do as following.
- Favorite 1 : 7 DWtv, 6 Hunan 1, 8 TVE

❶ Press **Yellow** button.

❷ Select **Favorite** and select **Favorite 1** with ◁ or ▷ and Press (Enter).

Screen

❸ Select **DWtv** channel with ◁ or ▷, and Press (Enter).

Screen

❹ Similarly, Select **Hunan 1** and Press (Enter).
Select **TVE** and Press (Enter).

Screen

❺ You can do the same procedure for Favorite 2~5 respectively.

In the mode of selecting Favorite channels, "" mark with favorite number inside is marking on the right side of selected channel name and " " is flickering on the upper place showing Favorite mode is on now.

Favorite1 ~ Favorite5 are default name. You can change each name for your convenience.
Please refer to Page 42.

After editing favorite groups, you can watch only favorite channels later.
refer to page 41.

2) Lock Channels

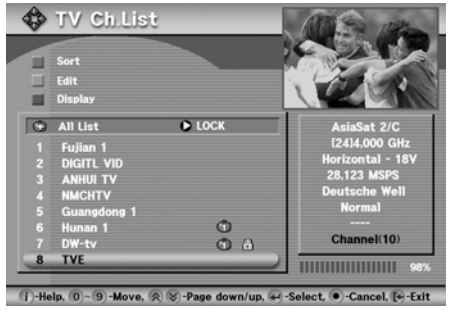
This function enables you to prevent children from viewing programs unsuitable for their age.
If locked, password requiring message will pop-up for the channel.

❶ Press **Yellow** button and Select **LOCK** with (CH▲) or (CH▼), and then press (Enter).

Screen

❷ Select any channel you want to lock, for example **7 DW-tv**, and press (Enter).
" " is flickering on the upper place showing Lock mode is on now.
If selected, " " will be marked on the right side of it channel name.

Screen

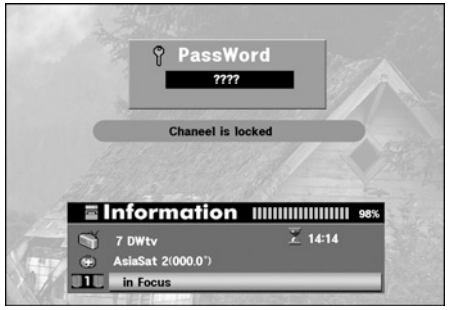


❸ If you want to cancel the channel lock, select the locked channel and press (Enter) again.

❹ Press **Exit** button finish the process.

※ Note : Without entering your password, you cannot watch a locked channel's program later.

Screen



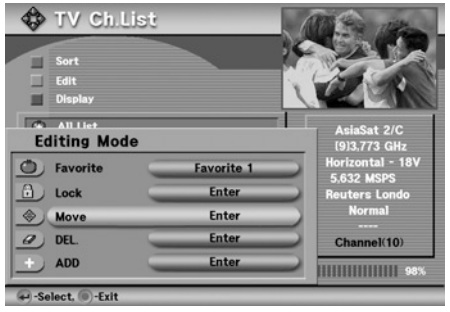
3) Move Channels

You can organize the number or sequence of any or all channels.

❶ Press **Yellow** button.

❷ Select **MOVE** with CH▲ or CH▼ and press Enter.

Screen



❸ "◐" is flickering on the upper place showing Move mode is on now. Select any channel you want to move, for example **WNS MEALON**, and press Enter. The cursor bar color will be changed.

Screen

❹ Move the selected channel with CH▲ or CH▼ to the position you want and press Enter.

Screen

❺ Press **EXIT** to finish the process.

4) Delete Channel

You can delete channels from the channel list.

❶ Press **Yellow** button.

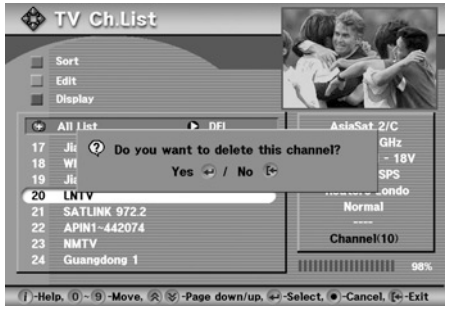
❷ Select **DEL**. with CH▲ or CH▼ and press Enter.

Screen

❸ Select the channel you want to delete with CH▲ / CH▼ and Press Enter .

❹ Then, you need to confirm the deletion. If you definitely want to delete, press Enter . If not, press **EXIT**.

Screen



※ Note : Please be careful when you delete channel(s).

❺ Press **EXIT** to finish the process.

5) Add Channel (PID Scan)

Using this function, you can add new channel by inputting its proper PID value.

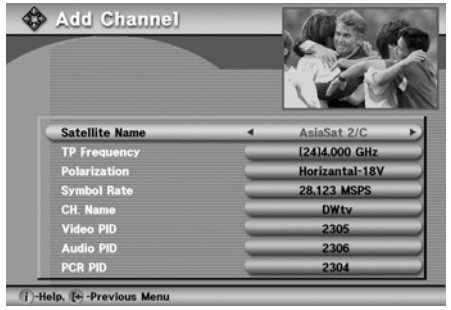
❶ Press **Yellow** button.

❷ Select **ADD** with CH▲ or CH▼ and press Enter .

Screen

❸ Select a satellite in which you want to add a new channel with ◁ or ▷ .

Screen



※ Note : You can only select satellite which you set in the 'Install' menu.

❹ Move to **TP Frequency** with CH▼ and change its frequency with ◁ or ▷ or inputting frequency with numeric buttons by pressing Enter .

※ Note : TP frequency consists of 5 digits ending with GHz.

※ For example : TP frequency 4,000GHz is ⓪ ▷ ④ ▷ ⓪ ▷ ⓪ ▷ ⓪

❺ Move to Polarization with CH▼ and select Horizontal or Vertical with ◁ or ▷ .

❻ Move to Symbol Rate with CH▼ and enter the Symbol Rate value with numeric buttons.

❼ Move to **CH.Name** with (CH▼) and enter the alphabetic characters with numeric buttons.

※ ***For example*** : if you want to enter **SAT-1**,
⑦⑦⑦ ▷ ②② ▷ ⑧⑧ ▷ ①①①① ▷ ①

※ ***Note : Press ⓪⓪ to delete a character.***

❽ Move to VIDEO PID with (CH▼) and enter the proper value \ with numeric buttons.

❾ Move to AUDIO PID with (CH▼) and enter the value between with numeric buttons.

❿ Move to PCR PID with (CH▼) and enter the value between 0000~8192 with numeric buttons.

※ ***Note : The above mentioned TP Frequency, Symbol Rate, VIDEO PID, AUDIO PID, PCR PID are very important for optimal satellite signal reception. We recommend you get professional advice where available. You cannot setup VIDEO PID for RADIO channels.***

⓫ After all set-up, press EXIT button for saving data.
You can see the added channel in the last line of TV Ch.List.

9-3 Display Mode

In this mode, you can display variant channels that may enable you to edit and select channels more conveniently.
It consists of ;

- All Channels : Display all scanned channels of all satellites.
- Favorite 1~5 : Display each selected favorite channels
- Satellite : Display the channels sorted by Satellite.
- Alphabet : Display the channels sorted by Alphabetic order.

1) All Channels

If you want to display all scanned channel list of satellites, select **All Channel** and press (Enter).

2) Satellite

If you want to display the channel list sorted by satellite of sorting mode select Satellite and press (Enter).

Screen

※ ***Note : The satellite should be selected first at the Sorting mode. (Refer to page 32)***

3) Alphabet

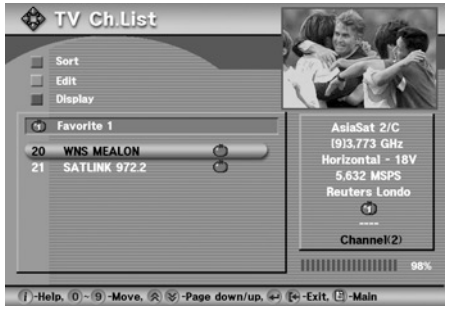
If you want to display the channel list that is starting specific Alphabet first, select **Alphabet** and press (Enter).

※ ***Note : The Alphabet should be selected first at the Sorting mode before. (Refer to page 32)***

4) Favorite 1~5

After making favorite channel groups(Please refer to page 34),
you can display each favorite group by selecting at this **Display Mode** and change its name as you preference.
To see favorite channels, select the favorite group you want with (CH▲) or (CH▼) and press (Enter).

Screen



You can change the name of favorite group as your convenience such as Movie, Sports, News, Music .....
For example, you can change Favorite 1 to DRAMA as below procedure.

▶ Select Favorite 1 by pressing BLUE button in the TV Ch.List.

Screen

▶ Select 'Favorite 1' with (CH▲) / (CH▼). And Press RED button.

Screen

▶ Press ③③ ▷ ⑦⑦⑦ ▷ ②② ▷ ⑥⑥ ▷ ②② ▷ ⓪⓪ ▷ ⓪⓪ ▷ ⓪⓪ ▷ ⓪⓪ ▷ ⓪⓪

Screen

▶ Press BLUE or EXIT to finish the process.
Now, You changed favorite1 to DRAMA.
With similar way, you can change favorite2 ~ favorite5 to your preferred name.

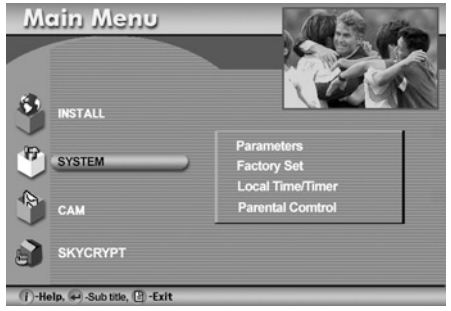
10. System

In this menu, you can set various parameters and control general function of the receiver.

It consists of ;

- ▶ Parameters : To set the general system parameters of the receiver.
- ▶ Factory Set : To reset the receiver as factory default status and check the receiver information.
- ▶ Local Time/Timer : Set the local time and 14 Timers.
- ▶ Parental Control : To various lock functions and change password.

Screen



10-1 Parameters

This mode is to set your system in the best condition.
Please refer to page 21.

10-2 Factory Set

This is to return all the stored parameters and information installed by yourself to the manufactured default status.
Since all the stored and installed data will be deleted, you must be careful in using this function.

❶ Press **MENU** button.

❷ Select **System** → **Factory Set** with CH▲ or CH▼ and press Enter .

Screen

❸ If you want Factory default, Press Enter .

❹ You will see the confirmation message pop-up. Press Enter again if you really want factory set. Press **EXIT** to cancel.

Screen

In this menu, you can also check the basic information of the receiver as well. This information will be useful when you need to upgrade the receiver

10-3 Local Time/Timer(Automatic power On/Off)

You can enter the current date and your local time into your receiver to allow you to set the Timer for watching or VCR recording or SLEEP TIMER, etc.

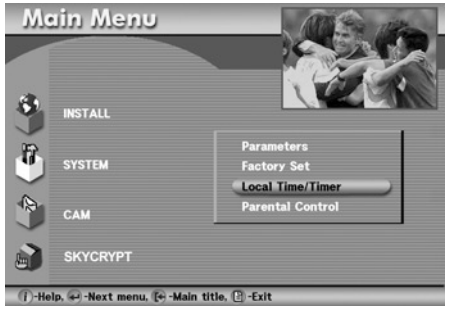
1) Local Time Setting

❶ Press **MENU** button.

❷ Select **System → Local Time/Timer**.

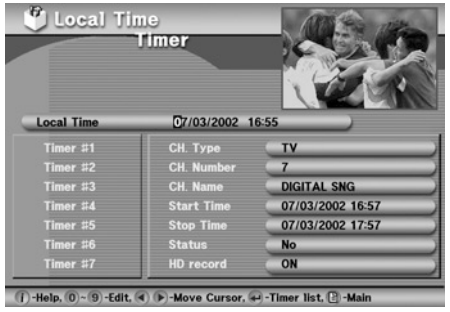
※ Note : Without prior Local time setting, the 'TIMER' function does not work.

Screen



❸ Press Enter .

Screen



❹ Set the current date and your local time in sequence.

※ **For example** : 1st December in the year of 2001, 1:56 PM,
Enter ⓪①①②②⓪⓪①①③⑤⑥ using your RCU.

❺ Press Enter to confirm and set Timers.

2) Timer Setting

In this mode, you can do pre-set 14 different Timers simultaneously.
Each timer consists of,

- **CH. Type** : TV or Radio
- **CH. Number** : Channel number
- **CH. Name** : Channel name
- **Start Time** : Turn on time when standby mode, or channel changing time during watching other channel.
- **Stop Time** : Turn off time.
- **Status** : Inactive mode (No)/ Active mode(**Once, Daily, Weekly**)

❶ Press CH▼ to select Timer #(number) and press Enter.
❷ Determine **CH. Type** by selecting TV or RADIO with ◁ or ▷.
❸ Move to **CH. Number** with CH▼ and enter channel number with numeric buttons or with ◁ or ▷.
❹ Move to Start Time with CH▼ and enter the time to power-on or switch on with Numeric buttons.
❺ Move to Stop Time with CH▼ and enter the time with numeric buttons.
❻ Move to Status with CH▼ and set **No, Once, Daily or Weekly** with ◁ or ▷.

※ Note : 1. Without Status being activated, Timer does not work.
2. If prior time is entered than current, Timer does not work.
3. You can pre-set 14 Timers simultaneously. Regardless of number of Timer, Timer will work in sequence of time sequence.
4. While Timer is working, The RCU will not operate except power button. If you want to operate RCU, simply press POWER just one time, then the RCU will be activated.

⚠ There are 2 kinds of Timer setting method.
- Manually at the Main menu : By following above instruction.
- Automatically at the EPG menu : By selecting the actual program (Refer to page 54)

10-4 Parental Control

There are various locking mode in this Receiver. You can lock the receiver itself or some specific parts in order to protect your preference.
You can also change the password in this menu.
It consists of,

- ▶ Age Limit
- ▶ Lock Receiver
- ▶ Lock Favorite Group
- ▶ Lock Channel Editing
- ▶ Lock Installation
- ▶ New Password
- ▶ Verify Password

Screen

1) Age Limit

Some programs restrict to children watching showing the age limitation.
This sub-menu allows you to set the age limitation for parental locking and protect children from viewing programs unsuitable for their age.

- ▶ Select **System → Parental control** with CH▲ or CH▼ in the main menu and press Enter.
- ▶ Select **Age Limit** and Press ◀ or ▶ to select age restriction.

None	No age limit
8	Programs restricted to over 8 years old.
12	12 years old.
15	15 years old.
18	18 years old.

※ Note : If you set a certain age limit, you can't watch some programs having the limitation information of the age and more.

※ Note : Age limit can be applicable only for the signal which carries age limit information.

2) Lock Receiver

You can lock the Receiver itself.
Select **Lock Receiver** with CH▲ or CH▼ and select **YES** or **No**.
If **Yes**, you may have to enter password when you power on the receiver in future.

3) Lock Favorite Group

You can lock a certain Favorite group you edited before in order not to permit access.
Select **Lock Favorite Group** with CH▲ or CH▼ and select a certain favorite group you want to lock, and press Enter.

4) Lock Channel Editing

You can lock the channel editing menu.
Select **Lock Channel Editing** with CH▲ or CH▼ and select **YES** or **No**.
If **Yes**, it will be impossible to use channel editing menu without entering password first.

5) Lock Installation

You can lock the installation menu.
Select **Lock Installation** with CH▲ or CH▼ and select **YES** or **No**.
If **Yes**, it will be impossible to use install menu without entering password.

※ Note : The default password is '0000'

6) New Password (Password Changing)

You can change a password.
Select **New Password** with CH▲ or CH▼ and enter 4-digit new password.

7) Verify Password

After entering 4-digit of new password, Enter the same 4-digit password again for verification.

11. Transponder

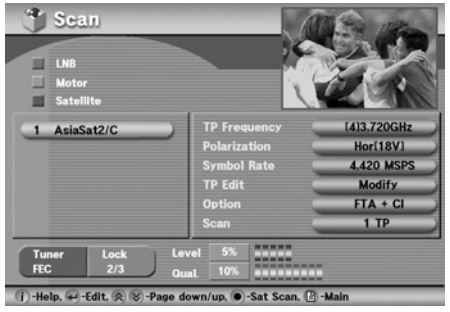
In this menu, you can Edit(add or modify) and delete certain transponders. After add or modify TP, you can also scan channels of the edited TP.

11-1 TP Add/Modify

❶ After executing **LNB Configuration** or **Motor Setup** procedure in the **Install** mode, press **Yellow** button to enter **Scan** mode.

> You can also come this mode in the main menu.
> Press menu button on the RCU and select Install → Scan, and press Enter.

Screen

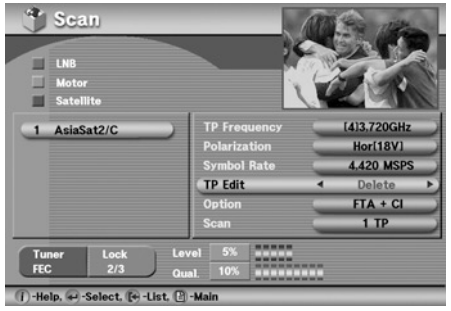


❷ Select any Satellite first you want to edit its TP and press Enter, Then the cursor will move to right section.
❸ Select **TP Frequency** and select the **TP** value you want to edit with ◀ or ▶.
  ▶ If you want to add a new TP, enter the TP frequency with numeric buttons after pressing Enter.
  ▶ If you want to modify a specific TP, move to the TP with ◀ or ▶ and enter new frequency with numeric buttons.
❹ Move to **Polarization** with CH▼ and the set the proper value.
❺ Move to **Symbol Rate** with CH▼ and enter the proper symbol rate value.
❻ Move to **TP Edit** with CH▼ and select **Add** if you want to add, or select **Modify** if you want to modify with ◀ or ▶.
❼ If you want to scan channels of the edited TP, Refer to 11.3 Manual TP Scan.

11-2 TP Delete

❶ Do the same procedure as above ❶ → ❷.
❷ Move to **TP Edit** with, CH▼ and select **Delete** with ◀ or ▶, and Press Enter.

Screen



❸ When the menu asks you to confirm the deletion, press Enter if you really want to delete it, or press **EXIT** key if you don't want..

Screen

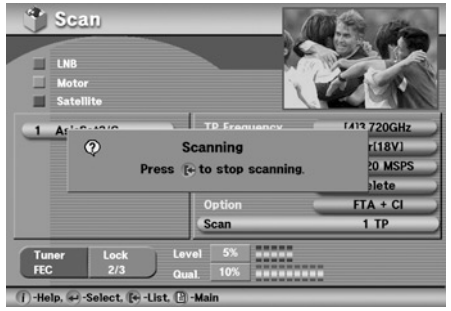
11-3 Manual TP Scan

You can Scan only 1 TP of a certain satellite.

❶ After proceeding above TP Edit, move to **Option** and select **FTA** only or **FTA+CI**

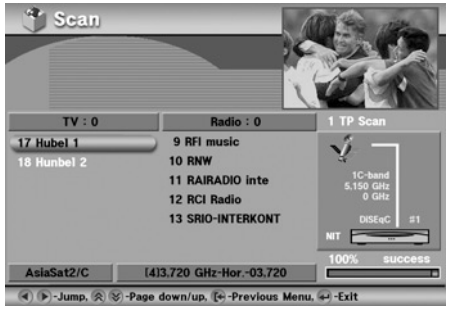
❷ Move to **Scan** with (CH▼) and press (Enter). As a result, you can get the following message. If you want to stop scanning, press **EXIT**.

Screen



❸ After scanning process, the first channel of scanned **TP** will be displayed.

Screen



※ Note : You can also do manual TP Scan without TP edit. Select any TP of any satellite you want to scan and follow above process. If the scan fails, please check whether your entered values are correct or not and the signal reception sensitivity is good or bad.

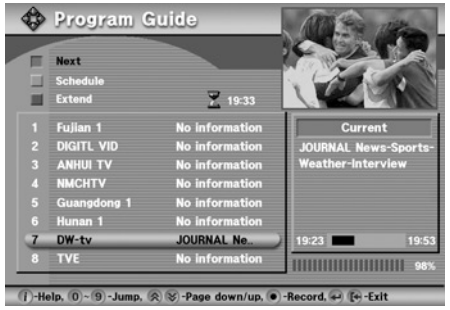
12. EPG(Electornic Program Guide)

You can check the channel and Program information on the channels.
This Receiver supports current/Next and program schedule information of a certain channel and extended information of programs.
Moreover, the Reservation function of this Receiver will help you not to miss certain important program.

12-1 Current / Next Information

❶ Press **GUIDE** button, then **Program Guide** menu will be displayed.

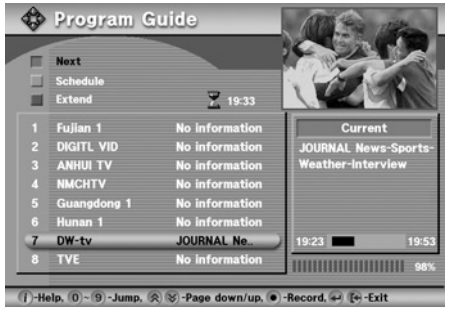
Screen

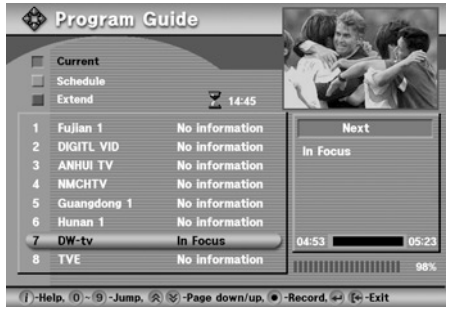


You can check local time, channel name, and other brief information of the current program.

※ Note : 1. If you didn't set local time under 'System Parameters' section, the GUIDE function may not work properly.
2. EPG information is delivered by satellite from service providers. If the channel does not carry any signal on the guide data, this function may not work properly.
3. You can also do the volume control with ◁ or ▷.

❷ Select **Channel** with CH▲ or CH▼.
Then you can see current or next program information of the selected channel.
❸ Press **GREEN** button, then current or next program information will be converted to next or current program information respectively.

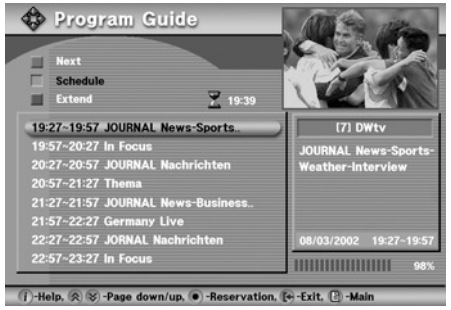




12-2 Schedule Information

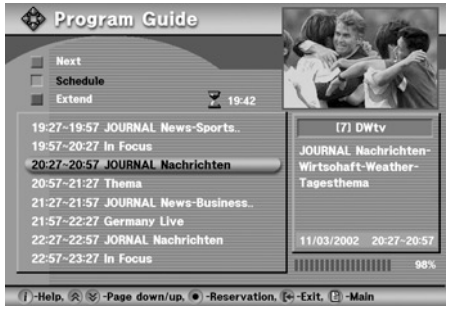
❶ Press **YELLOW** button, then you can see program schedule list of the selected channel.

Screen



❷ In the right section, you can also find more detail information of a certain program.

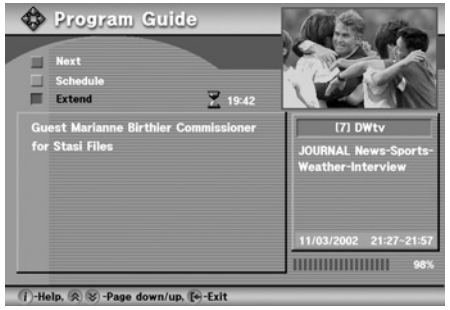
Screen



12-3 Extended Information

❶ Press **BLUE** button, If you want to see more extended information of the selected program.

Screen

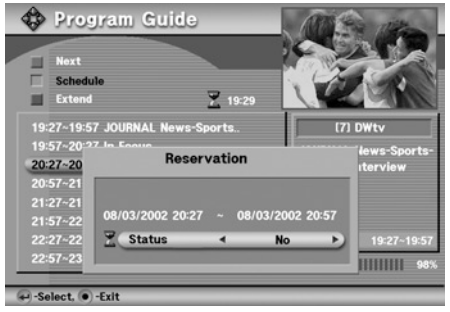


12-4 Progam Reservation

Using this function, you can set up automatic power on-off (Timer) of a certain program.

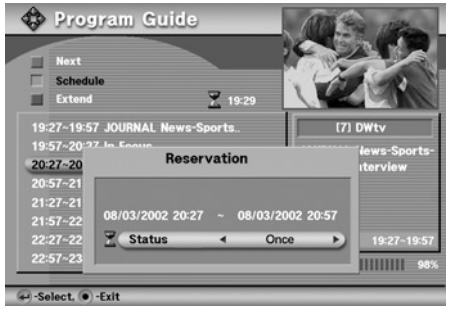
❶ In the **Schedule** mode by pressing **Yellow** button, select a program you want to reserve with (CH▲) or (CH▼) . and Press **RED** button. Then, **Reservation** window will pop up.

Screen



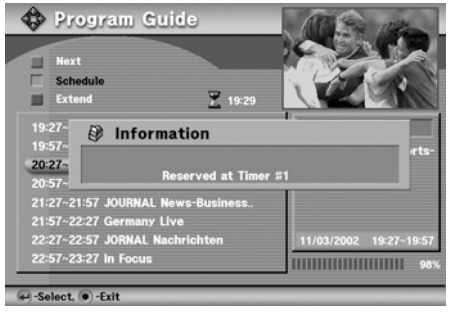
❷ Select between **No, Once, Daily** or **Weekly** in **Status** with ◁ or ▷.

Screen



❸ Press (Enter) to save the new **Timer** setting.

Screen



❹ Press **EXIT** button to finish **GUIDE** menu.

※ Note : 1. Without 'STATUS' being actuated, 'Timer' does not work.
2. If a program of prior time than current is selected, Timer does not work.
3. Refer to Setting Timer setting(page 47) in System Parameters in this manual.

If reserved, TV Channel will be automatically turn to the reserved Channel(program) when the set time comes.

11. Other Functions

1) TV / SAT switching

This function is used for receiving a signal through the RF modulator.
If your receiver has no 'TV ANT IN' terminal in the rear panel, this key may not work.

❶ Press **TV/SAT**. The signal reception path will change to RF modulator and **TV/SAT** LED on front panel will be lighted.

❷ The signal output through the RF modulator will be as follows :

TV/SAT LED	Power ON	Power OFF
ON	TV/ANT IN signal will be out	
OFF	Decoded signal will be out through RF.	TV ANT IN signal will be out.

2) T V / RADIO switching

You can use this menu when you change a TV channel to a Radio channel or vice versa.

❶ Press **TV/RADIO**.
❷ If using a radio channel, **r001** will be displayed on the front panel.

3) Teletext

Teletext Service is text data service from Service Provider.
It is available only when the satellite signal carries teletext service data.

❶ Press **TTX** button and wait.

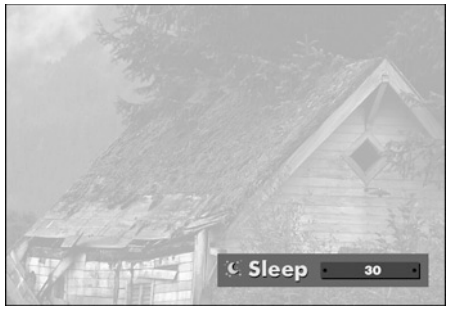
Screen

This Receiver is Teletext compatible and does not require the use of a Teletext decoder to view contents.

4) Sleep Timer

The receiver will automatically power-off when the time you set is passed.
Press **SLEEP** button until it appears the right time you want.

Screen



※ Note : 1. You can set SLEEP Timer in 30 minute steps up to 150 minutes.
2. The SLEEP Timer does not work at the OSG mode.

5) AUX in

You can set in/out mode of the two scart connectors (TV, AUX) on the rear panel. Press **AUX** button again and again until the scart mode you want is displayed.

Screen

Screen

Screen

SAT	Input satellite signal will be output to TV Scart and AUX (VCR) Scart. (can connect VCR to AUX connector for recording)
AUX	Input signal from AUX scart connector will be output to TV scart. If there is no input from AUX scart, your receiver will work as if you chose SAT mode.
AUX 2	Input signal from AUX scart connector will be output to TV scart by force.
TV	Input signal from TV scart connector will be output to AUX scart. (Only for CVBS)

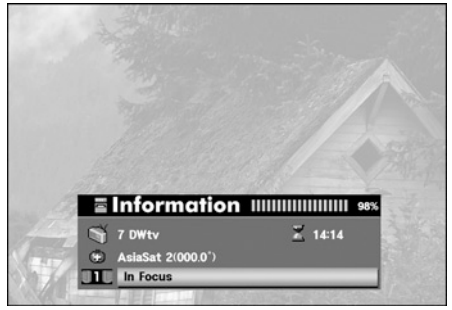
※ Note : You cannot see picture when set to AUX 2 mode and there is no input signal from outside.

6) Channel / Information

Brief information is displayed, such as current channel type, name, local start/end time, guide information, current time, fav/normal mode, Audio mode and Audio ID.

❶ Press **INFO** button, then the information bar will pop-up.

Screen



※ Note : If you have no information, Cheek your local time setting is correct.

14. Common Interface

14-1 CAM Initializing

To enjoy watching scrambled broadcasting channels, you will need a Common Interface Conditional Access Module(CAM) and a Smart card from the service provider (program distributor). If you are subscribing to services from more than one service provider, you need to change different smart card or even different CAM. Since a smart card is connected to a single service provider, a limited range of channels will be available. Without the CA Module and the smart card, you can watch only **Free-to-Air** programs.

※ PIN-Code

The card is loaded with a 4-digit code, a so-called PIN code (Personal Identification Number). Normally the PIN code is '0000' or '1234'. The PIN code is necessary for the future extra service offered by the service provider.

By Inserting **DVB Common Interface** compatible **CAM** to the **PCMCIA** slots of the Receiver and a proper **Smart card** into the **CAM**, you can watch the relevant encrypted channels.

❶ Insert a **CAM** into one slot of the receiver and a Smart card into the **CAM**. (You can also insert two different **CAM**s into each slot at the same time)

※ Note : 1. Insert the CAM fully into the slot so that the arrow marked on the CAM faces upwards and inwards.

2. Insert the smart card fully into the CAM so that the micro chip (gold color) faces upwards and inwards.

❷ The message of **CAM Initializing** will appear on the screen.

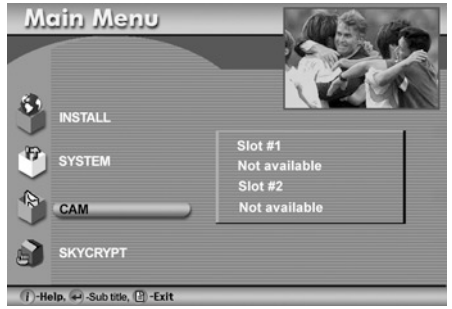
❸ After the message **CAM Initializing** has disappeared, you can select the channel you want.

14-2 Checking the status of CAM

You can check the status of CAM inserted in each slot.

❶ Select **CAM** with CH▼ in the **Main Menu**. Then you can see brief information of an inserted **CAM**.

Screen



❷ If you want detail information, select the CAM with CH▲ or CH▼, and press Enter.

❸ Proceed with further instructions displayed on the screen, then you can check more detail information depending on the **CAM** in use.

※ Note : Further detailed information is not mentioned in this manual since the information depends on CAM.

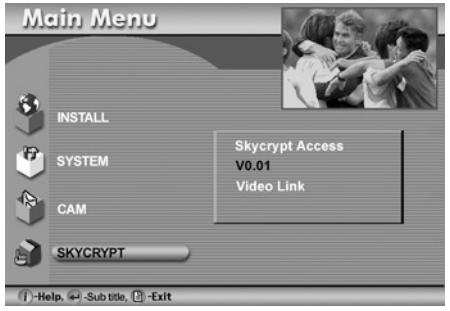
15. SKYCRYPT Access Systema

15-1 Checking the status of Smart Card

You can check the status of CAM inserted in each slot.

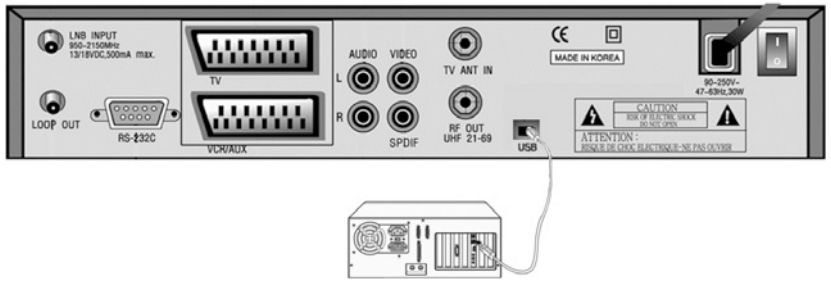
❶ Select **SKYCRYPT** with (CH▼) in the **Main Menu**. Then you can see version of **SKYCRYPT Access System**.

Screen



15-2 SKY VideoLink

❶ Connect your PC and the receiver using USB.

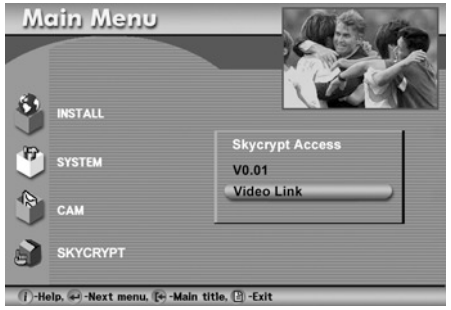


※ Note : Install the Sky VideoLink CD in your PC following below procedure

- ***Power off the Receiver.***
- ***Performaing CD installshield wizard .***
- ***After 100% procedure, wait a while until you see "Please plug it in and power it on" message.***
- ***Connect the Receiver with your PC using USB cable.***
- ***AC power on the receiver***

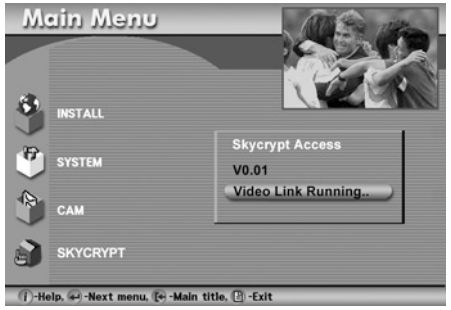
❷ Press **MENU** button and Select **SKYCRYPT** and press (Enter).

Screen



❸ Check the USB Cable Connection.
If it's connected properly, press (Enter).
If not, press **EXIT**.

Screen



❸ To cancel Video Link Mode, press **EXIT**

※ Note :Refer to the Video Link user manual for the details.

※ Warning : If you press (Enter) without USB Connection, The RCU will not work any more. Power On/Off.

Trouble Shooting

There may be various reasons for the abnormal operation of the unit. Therefore, if the unit does not work properly, check it according to the procedures shown in the table below :

Problem	Possible causes	Remedy
LED on front panel does not light	AC power cord disconnected.	Connect power cord properly into the power socket.
No Picture or sound	Wrong connection of the video/audio output to TV input terminal. Wrong connection of satellite antenna cable. Wrong direction of satellite antenna. No signal or weak signal. Wrong setting of channel information in MENU screen.	Connect two terminals correctly. with scart cable or RCA or RF cable. Connect the antenna cable correctly. Adjust the direction of antenna. Check the cable connections, LNB and other equipment connected between the LNB and the receiver or adjust the antenna. Type the setting value correctly.
Black-and-white screen or V-Hold	Your TV mode is different from satellite broadcasting mode.	Use TV of same mode. Use the NTSC/PAL converter con-nected to the receiver and TV.
The remote controller is not working	Battery exhausted. Fluorescent light interfering with the remote controller Remote controller is incorrectly aimed.	Change the batteries. Switch off the light. Aim the remote controller at the receiver.

Specifications

System capabilities	Fully DVB compliant	
LNB/Tuner input	Connector	IEC 169-24, female
	Frequency range	950MHz ~2150MHz
	Signal level	-65dBm ~25dBm
	LNB supply	13/18V, max. 500mA
	LNB switch control	22KHz, 0/12V
	DiSEqC	Ver 1.2 & Ver 1.0 Compatible
Demodulator	Front end	QPSK
	Symbol rate	2MSps - 45MSps
	SCPC and MCPC Capable	
	Spectral inversion	Auto conversion
System resource	Processor	32bit processor (50MHz)
	SDRAM	8Mbyte
	FLASH	2Mbyte
	EEPROM	2Kbyte
Video Decoder	MPEG 2	Main Profile @ Main Level
	Data Rate	Up to 15M bits/s
	Resolution	720 X 576, 720 X 480
	Video format	PAL, NTSC
	Aspect Ratio	4:3, 16:9
Teletext	DVB compliant	
MPEG Audio	MPEG 1 layer 1 & 2	
	Type	Mono, Dual mono, Stereo, Joint Stereo
	Sampling rates	32, 44.1 and 48 KHz

Serial data interface	Connector	9pin D-sub male, max. 115K bps
Remote control	Code	NEC-IR
	Operating condition	up to 7 Metre
Power supply	Power consumption	Max. 30W
	Supply voltage	90V ~250V
	Supply frequency	47Hz ~63Hz
Rear Panel connectors	Video out	1 X RCA cinch
	Audio L/R	2 X RCA cinch
	S/P DIF or 0/12V(Optional)	1 X RCA cinch
	Serial data	9pin D-sub male
	Digital tuner input	IEC 169 -24
	Loop-through Digital tuner	IEC 169 -24
	Terrestrial ant input	IEC 169 -2
	RF modulator output	IEC 169 -2
	TV SCART (European model only)	RGB, CVBS, audio
	VCR SCART	CVBS, audio
	USB	USB, Type B

RF modulator (PAL or NTSC) PAL G/I/K TV Type	Connector	IEC 169-2, female/male
	Frequency	470 - 860MHz
	Output channel number	21~ 69
Physical Specification	Case Size (W X H XD)	335 X 58.5 X 271(mm)
	Weight (Net)	2.5Kg

MEMO

MEMO